6.5 Historic and Cultural Resources

6.5.1 A Brief History of Stafford County

Stafford County was established in 1664 and originally encompassed most of northern Virginia, including the areas which later became the Counties of Arlington, Fairfax and Prince William and the City of Alexandria.

Stafford County's prehistory is documented with fossil remains of small sea creatures that can be found along the rivers and tributaries. Artifacts identified through archaeological study tell us that prehistoric man occupied Stafford County from the Paleo-Indian Period (ca. 10,000-8,000 B.C.) through the Archaic Period (ca. 8,000-500 B.C.), during which people lived in seasonal, nomadic groups, and the Woodland Period (ca. 500 B.C.- A.D.1600), which is

characterized by the establishment of permanent settlements and an emphasis on agricultural practices.

In 1608, John Smith mapped the major rivers, tributaries, Native American settlements of the Chesapeake Bay including substantial portions of Stafford County. Powhatan, chief of the Potowomeks, and his daughter Pocahontas, were associated with these settlements, which included the village large of Potowomek, located at what is now Marlborough Point.

Stafford County has strong connections to events that shaped our nation's history. Rich arable land and early colonial as industries, such iron manufacturing and quarrying of sandstone and granite, attracted important families, such as the



Brents, Carters, Masons, Fitzhughs, Mercers, and Washingtons. During the Revolutionary War, James Hunter's Iron Works contributed significantly to earning our freedom from British rule by supplying weapons and implements to the Continental Army and Navy.

Falmouth, founded on the north side of the Rappahannock River, was a prominent port town throughout the 18th century and the first quarter of the 19th century. It was the terminus for goods, including tobacco and flour, transported east from Warrenton and shipped to England in exchange for a variety of products. Enslaved Africans were also shipped to Falmouth where slave auctions were held.



Like other port towns of the colonial period, Falmouth attracted Scottish entrepreneurs, such as Basil and Samuel Gordon. The Gordons established a thriving marketing industry. The town also supported a number of water mills that flourished mostly due to the transition from tobacco cultivation to grain.

Stafford County residents rallied to defend the country during the War of 1812 by establishing the 45^{th} Virginia Militia Regiment, which defended both Stafford and Westmoreland Counties. British troops rampaged through areas of the County en route to Washington, D.C.

In the first half of the 19th century, Stafford County experienced the rise of the railroad. In 1834, the Richmond, Fredericksburg and Potomac Railroad opened its first segment, connecting Fredericksburg with Richmond. Then in 1842, the railway was extended north to Aquia Landing and eventually to Washington, D.C.

Situated halfway between the Union and Confederate capitals, Stafford County became a crossroads of military activity during the Civil War. The federal forces arrived en masse in the latter part of 1862. During the Fredericksburg and Chancellorsville campaigns, November 1862 through June 1863, Stafford County was occupied by more than 100,000 troops. The effect of the Federal Army's presence on the Stafford County landscape and economy was devastating. The army denuded the County of its trees and fences, agricultural fields were trampled and neglected, and foraging troops

"liberated" food and other essentials from the civilian population. Four years of warfare left Stafford County barren and ravaged. The effects of the Civil War remained visible on the landscape into the 20th century.



After the Civil War, Stafford County struggled to regain its former economic stability. The agricultural practices of Stafford at this time were characterized by a transition from grain crops to dairying and market gardening. Large family farms were still present, but several were subdivided—many producing only enough to sustain the immediate family and their livestock. This period also saw the rise of the fishing industry in Stafford County.

From the early 20th century through the end of World War II, Stafford County witnessed growth with the construction of U.S. Highway 1, expansion of Quantico Marine Corps Base to the north, and establishment of Fort A. P. Hill to the south and Dahlgren Naval Base to the east. With the rapid expansion of the Washington, D. C. metropolitan area and the construction of the Federal Interstate Highway System (I-95) in the late 1960s, Stafford County witnessed the creation of many suburban residential communities and commercial developments.

Stafford's long agricultural heritage is now being offset by an increasing emphasis on commercial enterprise. Stafford is now faced with issues of growth, conservation of natural and heritage resources, and maintaining a sense of community and place.

6.5.2 Known Heritage Resources

Stafford County's heritage resources are identified and evaluated through several mechanisms, including the National Register of Historic Places Program, the Virginia Landmarks Register Program, the Stafford County Historic Resource Overlay District designation, the National Historic Landmarks Program, and the Stafford County Cultural Resource Inventory designation.

The National Register of Historic Places, which is administered by the National Park Service, is the nation's official list of cultural resources worthy of preservation. Stafford County currently has 14 listings in the National Register

Aquia Episcopal Church, 1751-1755
Listed on the National Register and the Virginia
Landmarks Register, and designated as a Stafford
County Historic Resource Overlay District and a
National Historic Landmark, Aquia Episcopal Church is
one of Stafford County's most significant historic

of Historic Places, but several other properties have been determined eligible for this prestigious listing.

The Virginia Landmarks Register, administered by the Virginia Department of Historic Places, is the state's official list of properties that are significant to Virginia's history. There are currently 15 Stafford County resources listed in the Virginia Landmarks Register.

The Stafford County Board Supervisors designates historic places as Stafford County Historic Resource Overlay **Districts** included ordinance. Properties within historic overlays must have public value and warrant conservation and preservation. There are now 23 Stafford County Historic Resource Overlay Districts.

The National Historic Landmark Program designates nationally historic significant places possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, fewer than 2,500 historic places in the United States bear this distinction. While there are many

important historic places in the United States, only a small number qualify for the National Historic Landmark Program. Three Stafford County sites— Belmont, Ferry Farm, and the Aquia Episcopal Church—have been designated as National Historic Landmarks.

properties.

6.5.3 Stafford County Cultural Resource Inventory

As a Certified Local Government, Stafford County is required to periodically update and maintain an inventory of known cultural resources. The Department of Planning & Zoning maintains the Stafford County Cultural Resource Inventory. As of May 1, 2008, over 1,500 resources were included in the inventory. Resources include historic buildings, archaeological sites, and over 430 family and community cemeteries.

6.5.4 Significant Cultural Resources

The table below lists some of Stafford County's most significant cultural resources. Most are currently listed in the National Register of Historic Places or Virginia Landmarks Register or designated as a National Historic Landmark or Stafford County Historic Resource Overlay District. Properties recorded with no distinction have been determined eligible for the National Register of Historic Places. As more intensive survey continues in the County, additional resources may be determined worthy of listing.

Table 6.20 Significant Heritage Resources; Stafford County, VA

Property	Location	National Register	Virginia Landmark	Stafford County Historic Resource Overlay District	National Historic Landmark	Eligible for National Register but not Currently Listed
Accokeek Furnace Site	Address Restricted	Х	Х	Х		
Aquia Episcopal Church	3938 Jefferson Davis Highway	Х	Х	Х	Х	
Belmont (Gari Melcher Home)	224 Washington Street	Х	Х	Х	Х	
Bloomington House Site & Adie Cemetery	Patowomack Park					Х
Aquia Landing Aquia Landing Battlefield	Aquia Creek & Potomac River					Х
Redoubt #2 (Brockman's Fort or Fort No Name)	15 Old Fort Road	Х	Х	X		
Brent Cemetery	Address Restricted			Х		Х
Carlton	501 Melchers Drive	Х	Х	Х		
Chatham (within Fredericksburg- Spotsylvania National Military Park)	120 Chatham Lane	Х	Х			
Clearview	22 Strawberry Lane	Х	Х	Х		
Civil War fortifications (4), encampments (2), corduroy road, 18 th –19 th century quarries (2), sandstone bridge abutments & roadbed (Old Potomac Church Road)	Rappahannock Regional Landfill					Х
Clifton Chapel	60 Clifton Chapel Lane					Х
Crucifix Monument	3140 Jefferson Davis Highway			Х		Х

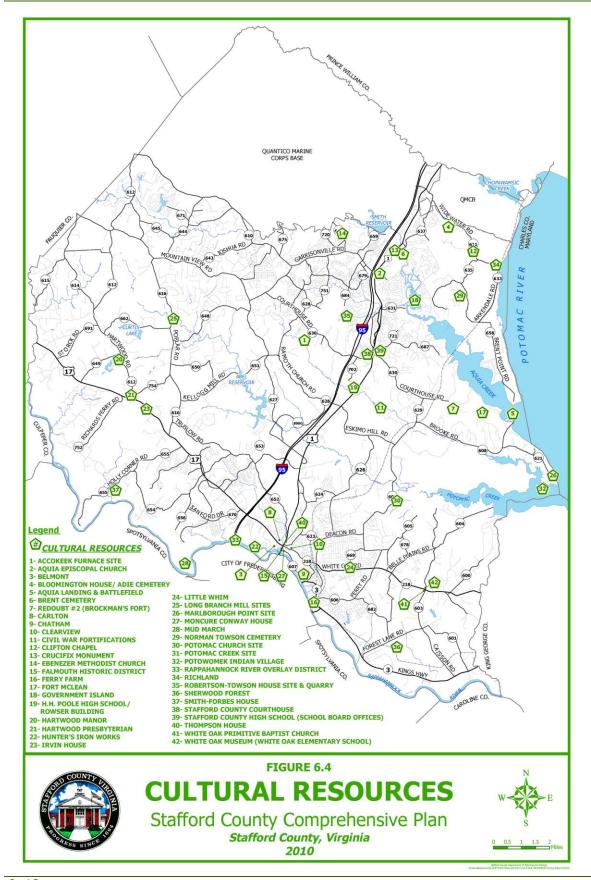
		ister	nark	rce rce		-e
Property	Location	National Register	Virginia Landmark	Stafford County Historic Resource Overlay District	National Historic Landmark	Eligible for National Register but not Currently Listed
Ebenezer Methodist Church 168	Onville Road			Х		Х
Falmouth Historic District Hwy	1 & Hwy 17	Х	Х	Х		
Ferry Farm 240	Kings Highway	Х	Х	Х	Х	
	of Courthouse d. 40-56B			Х		Х
Government Island Aqu Run	ia Creek & Austin	Х	Х	Х		
H.H. Poole High School (Rowser Building) 1739	9 Jefferson Davis nway					Х
Hartwood Manor 335	Hartwood Road			Χ		Χ
Hartwood Presbyterian Church 50 F	lartwood Road	Χ	Х	Χ		
Hunter's Iron Works 138	Blaisdell Lane	Χ	Х			
Irvin House 179	1 Warrenton Road					Х
Little Whim 375	375 White Oak Road			Х		Х
	g Branch down to lar Rd, West Stafford					Х
Marlborough Point Site (Town of Marlborough Archaeological Site)	borough Point	Х	Х	Х		
Moncure Conway House 305	305 King Street		Х	Χ		
	ford & Spotsylvania nties		Х			Х
Norman-Towson Cemetery Qua	rry Road					Χ
Potomac Church Site 1090) Brooke Road	Χ	Х			
Potomac Creek Site (Potowomek Indian Village)	ress Restricted	Х	Х			
Rappahannock River Historic Overlay District see	historic overlay map			Х		Х
Richland 945	Widewater Road					X
Cuarry Sub	Austin Ridge Subdivision, adjacent to community pool					Х
	971 Kings Highway 59-71D, 59-71.					Х
Smith-Forbes House 58 V	Vestebe Lane			Χ		Χ
	2119 Jefferson Davis Highway			Х		
Stafford County High School (Stafford School Board Offices) 31 S	Stafford Avenue					Х
Thompson House 122	Cambridge Street			Χ		Χ
White Oak Museum (White Oak Elementary School) 985	While Oak Road			Х		Х
White Oak Primitive Baptist Church 8 Caisson Road X X X						

Source: Stafford County Department of Planning & Zoning

^{*} A State Owned Resource

6.5.5 Findings

- A large number of historic and cultural resources are located in Stafford County
- The Cultural Resources Management Plan uses the land development process to identify and protect cultural resources
- Procedures for identification and protection of historic and cultural resources are recommended but not mandatory; the County's adoption of the Cemetery ordinance codifies these procedures for cemeteries. Adoption of a Historic Preservation Ordinance would further strengthen the protection of historic and cultural resources.



6.6 Community Facilities

The ability to provide adequate services help to shape a community and make it a desirable place to live. These services include public safety, education and

cultural amenities, and waste management. This section explores the services that are provided in Stafford County. Several maps in this section identify the location of community services in the County.

6.6.1 Public Schools

As Stafford County's population has steadily increased, so too has its student enrollment figures. The average daily membership (ADM) for Stafford County Public Schools was 9,761 students in 1982, and has since climbed to 25,852 students for the 2009-10 school year. As of March 31, 2010, the Stafford School District had 11,324 elementary school students, 6,309 middle school students and 9,016 high school students. Although the rate of school enrollment increase has slowed within the last four years, the School Board

Community **Facilities**

- Schools
- Law Enforcement
- Correctional **Facilities**
- Fire and Rescue
- Libraries
- Hospitals
- Waste Management

projects that enrollments will continue to increase through 2015-16 to 27,917 students.

Currently the County operates 30 schools (17 elementary schools, 8 middle schools and 5 high schools). The table below provides basic data on each school and a map identifies their location in the County.

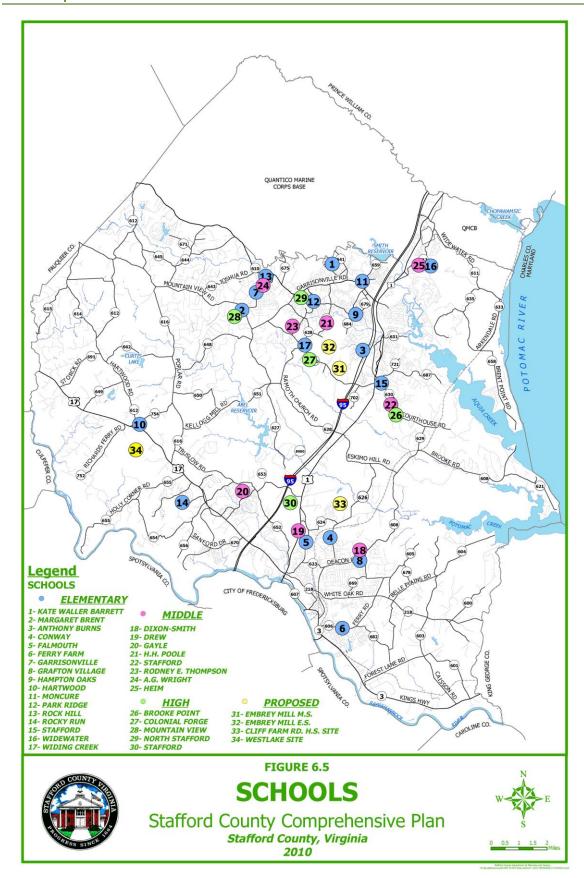
Table 6.21 Stafford County Public Schools Average

School	Location	Daily Membership 2009-2010	Operational Capacity	Construction Date	
Elementary Scho	Elementary Schools (Pre-K-Grade 5)				
Kate Waller					
Barrett	150 Duffey Dr.	707	950	2002	
	2125 Mountain				
Margaret Brent	View Rd.	772	950	2004	
Anthony Burns	60 Gallery Rd.	756	950	2006	
	105 Primmer				
Conway	House Rd.	821	950	2006	
				1967; Addition	
Falmouth	1000 Forbes St.	556	794	-1997	
				1957;	
				Additions -	
				1963, 1989,	
Ferry Farm	20 Pendleton Rd.	539	732	1992	
				1981;	
Garrisonville	100 Wood Dr.	548	768	Addition- 1999	

School	Location	Average Daily Membership 2009-2010	Operational Capacity	Construction Date
				1967;
Crafton Villago	EO1 Doncon Dd	594	754	Additions - 1977, 1996
Grafton Village	501 Deacon Rd. 107 Northampton	594	754	1977, 1996 1992; Addition
Hampton Oaks	Blvd.	723	950	– 1996
Hampton Oaks	Divu.	723	930	1963;
				Additions -
	14 Shackelford's			1966, 1989,
Hartwood	Well Rd.	604	649	1993
				1966;
				Additions -
Anne E. Moncure	75 Moncure Ln.	667	754	1973, 1997
	2000 Parkway			1990; Addition
Park Ridge	Blvd.	644	843	- 1994
				1989; Addition
Rock Hill	50 Wood Dr.	586	843	- 1994
Rocky Run	95 Reservoir Rd.	854	950	2000
	1349 Courthouse			1968; Addition
Stafford	Rd.	605	794	- 1996
Widowston	101 Dan Diah Dd	627	0.43	1988; Addition
Widewater	101 Den Rich Rd.	627	843	- 1995
Winding Cuasi	475 Winding Creek	721	925	1997
Winding Creek	Rd.	/21	925	1997
Middle Schools (
Dixon-Smith	503 Deacon Road	905	1,100	2006
				1951;
				Additions -
				1957,1990 and
Edward E. Drew	501 Cambridge St.	423	800	1998
T. Benton Gayle	100 Panther Drive	882	1,100	2002
	320 Telegraph			
Shirley C. Heim	Road	783	1,100	2008
	000 5	012	1 100	1995; Addition
H. H. Poole	800 Eustace Rd.	913	1,100	- 1998
Stafford Middle	101 Spartan Dr.	511	1,100	1991
Rodney E.	7E Walnolo Ct	1004	1 100	2000
Thompson	75 Walpole St.	1084	1,100	1981; Addition
A. G. Wright	100 Wood Dr.	808	920	– 1999
	•	000	520	1000
High Schools (G	· · · · · · · · · · · · · · · · · · ·	T	ı	
	1700 Courthouse			4655
Brooke Point	Rd.	1,631	1,800	1993
Calamial E	550 Courthouse	2 24 2	1 000	1000
Colonial Forge	Rd.	2,018	1,800	1999
Maustair View	2135 Mountain	4 040	1 000	2005
Mountain View	View Rd.	1,842	1,800	2005
Nowth Chaffaud	839 Garrisonville	1.007	1.035	1981; Addition
North Stafford	Rd.	1,667	1,925	- 2003
Stafford	33 Stafford Indian	1 050	1 000	1975; AIMIE
Stafford	Ln. Source: Stafford Co	1,858	1,800	Bldg -1981

Source: Stafford County Public Schools as of 6/10;

Enrollment figures in \boldsymbol{bold} exceed operational capacity



In order to appropriately serve its growing student population, Stafford County has made a significant investment in public school facilities. Since 1986, the County has constructed 10 elementary schools, five middle schools and three high schools. The County has also replaced a middle school, and made additions and upgrades to all three levels of schools. Two new facilities opened for the 2006-07 school year: Anthony Burns Elementary School and Dixon-Smith Middle School. One facility opened for the 2008-09 school year: Shirley Heim Middle School.

The Stafford County Public Schools Capital Improvement Program (CIP) for fiscal years 2011 to 2016 includes construction of a replacement high school and a Career and Technical Facility, renovations at 5 elementary schools, expanded support facilities, and site improvements to existing facilities.

Adult Education

Stafford County Public Schools also provide adult education courses at several middle and high school locations during the Spring and Fall. Courses are offered in the evenings and are generally 10 weeks in length. These low-cost courses cover topics such as computer concepts, home gardening, automotive maintenance, culinary basics, AutoCAD, wardrobe maintenance, home horticulture, and basic home repair and maintenance.

6.6.2 Law Enforcement

The Stafford County Sheriff's Office provides countywide law enforcement services. Supplemental services are also provided to the Counties of Spotsylvania, Prince William, Fauquier, and King George and the City of Fredericksburg with whom the County has mutual aid agreements. The Sheriff's Office has a total of 221 employees that includes 148 sworn officers, 6 animal control personnel, 30 civilian personnel, and 37 emergency communication center personnel.

During 2005, the emergency communications center received 143,410 calls, of which 51% (73,390 calls) were calls for service to which an officer responded. Officers made 8,429 arrests in 2005. In 2004, a total of 150,011 calls were received and 73,390 of those (49%) were calls for service. Between 2004 and 2005, the total number of calls received decreased by 4.4% but the number of calls for service increased by 3.9%. Between 2000 and 2005, the number of total calls received increased by 6.4% and calls for service increased by 12.6%.

The Sheriff's Office headquarters are in the new Public Safety Building located on Courthouse Road adjacent to the Administration Complex. Two satellite buildings are rented to house Narcotic investigations, Policy & Strategic Planning, Professional Standards, and Crime Prevention. The Sheriff's Office occupies about 40,000 sq. ft of the public safety building, housing the Sheriff's operation, Emergency Communications, and Emergency Management

Services. This new facility is expected to meet the facility needs of the Sheriff's Office for a 20- to 25-year life period.

6.6.3 Correctional Facilities

The <u>Rappahannock Regional Jail</u>, located at 1745 Jefferson Davis Highway, serves the adult corrections needs of the Counties of Stafford, Spotsylvania, and King George, and the City of Fredericksburg. A new 264,000 square foot, state-of-the-art corrections facility was opened in June 2000 which has a 662-bed capacity that can expand to 1,200. The jail authority has applied for permission for this expansion.

The <u>Rappahannock Juvenile Detention Center</u> is an 80-bed, 59,000-square-foot facility located at 275 Wyche Road that opened in December 2000. The facility provides pre-dispositional and post-dispositional juvenile detention housing.

The <u>Stafford Correctional Unit #21</u> located on Eskimo Hill Road is operated by the Commonwealth of Virginia and houses male inmates.

6.6.4 Fire and Rescue

The Fire and Rescue Department serves the entire County and is headquartered at the new Public Safety Building on Courthouse Road. The Department was established in 2005 as an "all hazards" agency that provides fire, rescue, basic and advanced life support emergency medical service, ambulance transportation and environmental hazard (Haz-Mat) response and mitigation. Other responsibilities of the Department include emergency management, explosive ordnance disposal, building plan review and fire code enforcement, fire and environmental crime investigation, and public education and preparedness. Mutual aid agreements exist with the Counties of Fauquier, King George, Prince William and Spotsylvania, as well as the Quantico Marine Base. In 2005, fire and rescue personnel responded to 19,651 emergency response calls; an increase of 5% from 2002 when the Department responded to 18,706 emergency calls.

The Fire and Rescue Department has a workforce of 60 career officers and 300 volunteers that operate from 14 fire and rescue stations, which are organized into three battalions. Each battalion includes 5 stations. Battalion 1 serves the northern portion of the County, Battalion 2 serves central Stafford, and Battalion 3 serves south Stafford. Seven stations are combined fire and rescue facilities; the remaining eight are stand alone fire or rescue stations. New facilities are designed and built as combination stations. Fire and Rescue Station 2, the newest station near the Courthouse, serves as a replacement station combining Fire 2 and Rescue 1 under one roof. The table that follows lists the stations and their locations.

Table 6.22 Fire and Rescue Stations, Stafford County, VA

Station	Location
Fire-Rescue Co. 1 – Falmouth	250 Butler Rd.
Fire-Rescue Co. 3 – Widewater	749 Widewater Rd.
Fire-Rescue Co. 5 – Brooke	222 Andrew Chapel Rd.
Fire-Rescue Co. 6 – Hartwood	67 Hartwood Church Rd.
Fire-Rescue 9 – Aquia Harbour	1001 Washington Dr.
Fire-Rescue Co. 10 – Potomac Hills	729 Widewater Rd.
Fire-Rescue Co. 12 - Berea	Sebring Way
Fire Co. 2 – Stafford	305 Jason Mooney Drive
Fire Co. 4 - Mountain View	924 Kellogg Mill Rd.
Fire Co. 7 – White Oak	12 Newton Rd.
Fire Co. 8 – Rock Hill	2133 Garrisonville Rd.
Rescue 1 – Stafford	305 Jason Mooney Drive
Rescue 4 – Mountain View	1268 Mountain View Rd.
Rescue 7 – White Oak	535 White Oak Rd.
Rescue 8 – Rock Hill	1565 Garrisonville Rd.

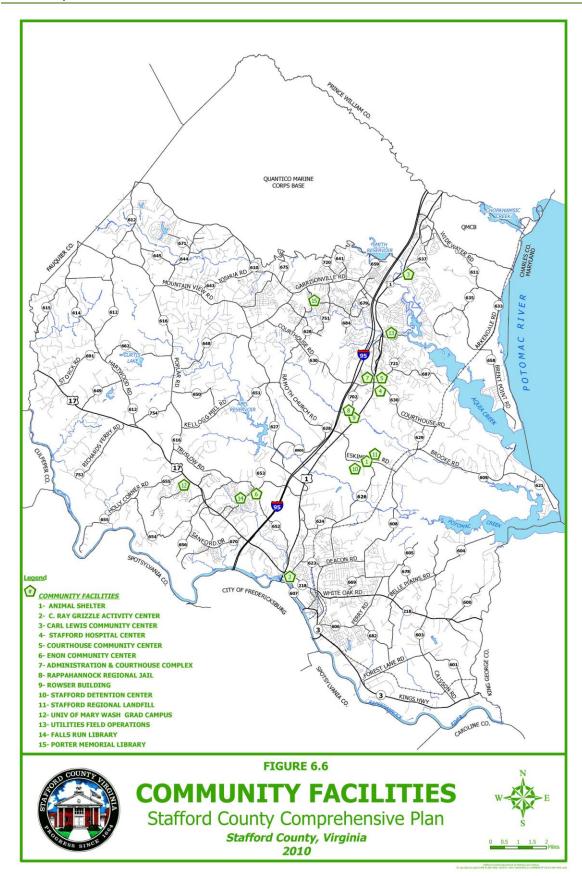
Source: Stafford County Fire and Rescue Department

The Capital Improvements Program for fiscal years 2009 - 2013 identifies the need for two additional fire and rescue facilities: North County and Airport, as well as construction of a Fire and Rescue Training Center.

6.6.5 Hospitals

Stafford Hospital Center, the first hospital in Stafford County, opened in 2009 on a 70-acre site on the southeast side of U.S. 1 and Courthouse Road. The hospital is designed to hold up to 100 beds. The site presently includes one medical office building. The facility is operated by MediCorp, the parent company of Mary Washington Hospital.

The next closest facilities are Mary Washington Hospital about 9 miles from central Stafford in the City of Fredericksburg and Potomac Hospital about 16 miles from central Stafford in Woodbridge, VA.



6.6.6 Libraries

The <u>John Musante Porter Branch</u> of the Central Rappahannock Regional Library system is the only Library within the County and is located at 2001 Parkway Boulevard. The Central Rappahannock Regional Library system consists of seven different branches in the City of Fredericksburg and in Spotsylvania, Stafford, and Westmoreland counties.

The Porter Branch of the Central Rappahannock Regional Library is housed in a 23,000 square foot building that was constructed in 1992. This branch is open daily and houses a collection of 124,672 items. Other features include:

- Public access computers (15) with internet service
- An 80-seat theater that can be partitioned to make two smaller rooms and a 20-seat meeting room
- The Porter Book Club (meets monthly)
- The Atrium that features monthly art exhibits of local artists' works

In 2005, the Porter Branch had over 729,000 library visits and circulated over 2.8 million items.

A second library is under construction. The Falls Run Branch of the library system located at the intersection of Lyons Boulevard and Plantation Drive in the England Run North Community is scheduled to open in the fall of 2010.

6.6.7 Solid Waste

The Rappahannock Regional Solid Waste Management Board operates the landfill in Stafford County. Residents may deposit household garbage at no charge. Commercial refuse haulers serving residents have to pay to use the landfill. The landfill accepts newspaper, aluminum cans, glass, plastic, cardboard, steel can, oil and office paper for recycling. The landfill is located on 700 acres of land. The County is currently working with the Virginia Department of Environmental Quality to permit an 80-acre area for the landfill for future expansion – an estimated 40-year extension to the life of the facility. The landfill has other sections that could also accommodate the County's growing needs for solid waste disposal.

6.6.8 Virginia Cooperative Extension

Using a combination of paid and volunteer staff, the Virginia Cooperative Extension (VCE) provides research-based information to County residents in the fields of agriculture/horticulture, 4-H youth development, food, nutrition and health, and family and consumer sciences. Educational programs in Agriculture and Natural Resources programs help to sustain the profitability of agriculture and forestry production, while protecting and enhancing the quality of land and water resources. The Food, Nutrition and Health Program and the Smart Choices Nutrition Education Program improve the quality of life of residents by encouraging appropriate and safe food choices and improving

health literacy. Through the 4-H program, youth aged 5-19 receive hands-on learning experiences and develop leadership skills.

During the 2005 Fiscal Year, the VCE served over 15,000 residents through contacts, volunteer opportunities, club membership and program participation. VCE volunteers donated over 5,500 hours, which represented a dollar value gained from volunteer service of \$109,241.

6.6.9 Rappahannock Area Community Services

The Rappahannock Area Community Services Board (RACSB) is a regional government agency that provides comprehensive services to individuals with mental health, mental retardation and substance abuse problems in Planning District 16 (including Stafford and Spotsylvania Counties). Established in 1970, the agency is managed by a board of 15-volunteer members who are appointed by member jurisdiction's local governing bodies. Two RACSB service sites are located in Stafford County: the Stafford Clinic and the Leeland Road Group Home.

6.6.10 *Findings*

- Significant investment has been made in the construction and maintenance of educational facilities to accommodate Stafford County's growing school population and additional facilities and improvements are planned
- The new Public Safety Building that houses the Sheriff's Office and Fire and Rescue Department should meet these agencies' needs over the next 20 to 25 year period.
- State of the art facilities for the Rappahannock Regional Jail and the Rappahannock Juvenile Detention Center were constructed in 2000
- Stafford County's Fire and Rescue Department is staffed by 60 career officers and approximately 300 volunteers
- A 100-bed hospital opened in 2009 near the Courthouse
- The John Musante Porter Library, which serves Stafford County, had over 729,000 library visits and circulated over 2.8 million items in 2005

6.7 Infrastructure

Adequate access to water, sewage disposal and electric and gas utilities is generally considered essential to the health and well being of residents. This

section presents a discussion of infrastructure facilities that are available in Stafford County. A map is included to identify infrastructure locations in the County.

6.7.1 Water and Sewer

The Stafford County Department of Utilities (DOU), under the direction of the County Board of Supervisors, has provided public water and sewer services to many Stafford County residents for over two decades. During that time, the service area population and demand for services have

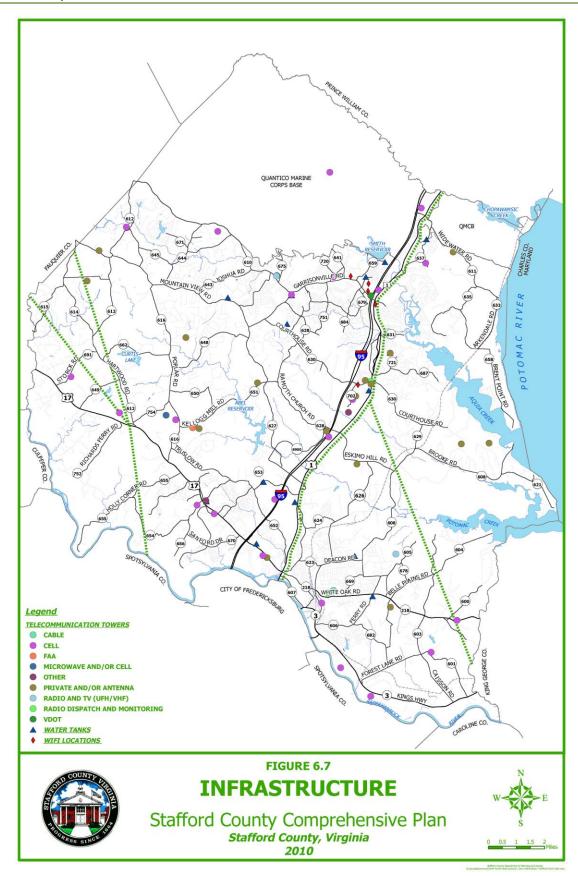
Infrastructure

- Water and Sewer
- Stormwater
 Management
- Natural Gas
- Electric
- Telecommunications& Cable

more than quadrupled and continues to grow. The public utility customer base is currently increasing at an annual rate of 5%. The DOU provides services to over 25,000 residential customers and more than 700 non-residential customers. It operates as an enterprise fund that is separate from the County's General Fund and is funded solely by the revenues received from its customers.

Not all residents have access to public water and sewer services. The County only provides public water and sewer to the Urban Services Area (USA), which is the portion of the County that has been designated for residential, commercial and industrial development. The designation of USAs, which limit the location of sewer line expansion, serves to limit residential densities in rural areas. Outside the USAs, approximately 10,000 dwellings use private wells and septic tanks to meet their water and sewage disposal needs.

Public drinking water is obtained from two surface water reservoirs (Abel Lake and Smith Lake) and a third is under construction (Rocky Pen Run). Abel Lake Reservoir is located in central Stafford and Smith Lake Reservoir is located in North Stafford. The combined safe yield of these two reservoirs is about 13.8 million gallons a day (mgd). The County's annual average daily demand is 9.7 mgd and the peak 90-day average is 11.6 mgd.



Water treatment occurs at the Smith Lake Water Treatment Facility and the Abel Lake Water Treatment Facility. The Smith Lake facility supplies water to the northern region of Stafford, while Abel Lake supplies the southern region. The maximum daily capacity for the two facilities is 20 mgd. After treatment, the water from both facilities meets or exceeds Virginia Department of Health and the Federal Safe Drinking Water Act Amendments of 1986 standards. The DOU system also stores approximately 15.8 million gallons of water in two ground storage tanks, two standpipes and 10 elevated tanks. The system also includes five primary pumping stations, and six standby pumping stations.

Sewage treatment is provided at Little Falls Run Wastewater Treatment Facility and Aquia Wastewater Treatment Facility. They have permitted capacities of 4 mgd and 6.5 mgd, respectively. The Little Falls facility is located in the southeast part of the County and the Aquia facility is in the north. The wastewater collection and transmission system consists of approximately 383 miles of gravity sewers, 82 pump stations, and 53 miles of associated sewer force mains.

Several initiatives are planned, including the construction of the Rocky Pen Run Reservoir and Treatment Facility project, which has an estimated cost of \$77 million and a 2013 completion date. When completed, the Rocky Pen Run Reservoir will have a safe yield of 13.1 mgd. The new water treatment facility will be designed to have a capacity of 5-10 mgd by 2013. With the addition of these resources, the County anticipates being able to meet the needs of its residents in the USA to the year 2050.

6.7.2 Stormwater Management

Stormwater Management is a mechanism for controlling water from rain or snowmelt that flows over the land surface and is not absorbed into the ground and urban and industrial stormwater that is discharged through conveyances, such as separate storm sewers, ditches, channels or other conveyances. The purpose of stormwater management is the mitigation of the adverse effects that land use changes and increased impervious land cover have on flooding and the aquatic environment. Adverse effects include downstream erosion, water quality degradation, and water channel flooding.

Stafford County's Stormwater Management Ordinance (Chapter 21.5 of the County Code) establishes minimum stormwater management requirements. All land development projects must comply with the requirements of this ordinance. Both the Stormwater Management Ordinance and the Zoning and Subdivision Ordinances encourage the use of Low Impact Development (LID). LID is an innovative stormwater management approach whose goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate and detain runoff close to its source.

Stafford County's stormwater infrastructure consists of more than 650 stormwater management facilities that fall into in the following general

categories: ponds; miscellaneous; manufactured/underground; infiltration trench; and filtration. Roughly 60% of the stormwater BMPs being used in the County are a type of pond. Overall, about 40% of the County's BMPs were classified as being in "Good" condition, 30% in "Fair" condition, and 15% in "Poor" condition. The condition of 15% of the BMPs was unknown because they could not be located or accessed. Most facilities are under private or community association ownership. The County requires Maintenance Agreements to be recorded in the County's land records.

6.7.3 Natural Gas

Residents, businesses and industries in Stafford County are provided natural gas service by Columbia Gas of Virginia, a member of the Columbia Energy Group Company. Columbia Gas of Virginia is the third largest distributor of natural gas in the State. A major natural gas pipeline bisects the County.

6.7.4 Electric

Three companies provide electric power in Stafford County: Dominion Virginia Power; Rappahannock Electric Cooperative; and Northern Virginia Electric Cooperative.

Major high voltage power lines bisect the County, generally from north to south; one through the eastern half of the County and one through the west. Other undeveloped easements exist as well. Figure 6.8 identifies the location of major power and gas transmission lines.

Dominion Virginia Power is constructing a 230 kv underground power transmission line on an existing 300 foot easement from Aquia Harbor through several north Stafford neighborhoods to Mountain View Road north of Shelton Shop Road. Initially they proposed aboveground lines. Residents and the County were vocal in their opposition to the proposal. In the Spring of 2008, the State Corporation Commission ruled that the power lines would need to be buried.

6.7.5 Telecommunications

Residents and businesses in Stafford County have access to an array of telecommunications services including high-speed Internet access, cable and wireless services. Several major national and international phone carriers provide local and long distance service. Unfortunately, access to these services is not universal. Certain areas of the County have limited access to the various technologies.

To accommodate the needs of the telecommunications industry while protecting the public safety and welfare of its residents and the character and

¹ U.S. Army Corps of Engineers, Baltimore District. Stafford County, Virginia Stormwater Infrastructure and Watershed Management Study, July 2005.

aesthetics of the community, Stafford County encourages the co-location of new telecommunications facilities on existing structures. This reduces the need for the construction of new towers. When this is not possible, the preferred locations for new towers are within Virginia Department of Transportation rights-of-way near interchanges along I-95, within the existing right-of-way for overhead power lines, within the railroad right-of-way adjacent to industrial or agricultural districts, or on industrial, commercial and public lands that are suitably buffered from residential areas.

6.7.6 Findings

- The Rocky Pen Run Reservoir and Treatment Facility is expected to be constructed by 2013 and these additional facilities are projected to meet the water needs of Stafford County residents until 2050
- 650 stormwater management facilities control surface runoff throughout the County
- The newest Dominion Virginia Power line located through north Stafford will be constructed underground
- Utilities and an array of telecommunications services are available in Stafford County but certain areas of the County still have limited access to these services

